

What is claimed is:

1. A computer-implemented method in a computer system of providing data from a first application program to a second application program during runtime comprising the following steps:
  - a. including in said first application program a linkage to a library of data types for describing data in said first application program, said library of data types enabling examination of said data in said first application program having said data types from said second application program, said library of data types comprising a definition of a record including:
    - i. a plurality of fields each containing identifying information associated with said record;
    - ii. a reference to a tag record, said tag record listing names and types of each of said plurality of fields contained in said referencing record, said tag record further recursively referencing a plurality of tag records each referencing an associated tag record listing the names and types of fields in referencing tag record, and ultimately, referencing a root record including a self-reference to a list of names and types of fields contained in said root record;
  - b. including in said first application object definitions for said data in said first application program according to said library of data types;
  - c. enabling said object definitions;
  - d. said second application program referencing said data at runtime by referencing a runtime record containing said data according to said object definitions, said second application program determining the nature of said data by referencing said runtime record and associated plurality of tag records, recursively, until reaching said root record; and
  - e. said second application manipulating said data via said object definitions according to said nature of said data specified by said runtime record, said tag record and said plurality of tag records.
2. The method of claim 1 wherein said definition of said record further includes a platform field for specifying a platform in which said data is native.
3. The method of claim 1 wherein said definition of said record further includes an operations field for use by said second application program during said manipulating of said data.
4. The method of claim 1 wherein said definition of said record further includes a size field for use by said second application program to determine said size of said record.
5. The method of claim 1 wherein said definition of said record further includes a name field for identifying said data.
6. The method of claim 1 wherein said runtime record comprises an event record which includes fields identifying a runtime event in said first application program.
7. The method of claim 6 wherein said fields in said event record include a type field identifying a type of runtime event which occurred in said first application program.
8. The method of claim 6 wherein said fields in said event record include a time field identifying a time at which said runtime event occurred in said first application program.
9. The method of claim 7 wherein said time field includes a relative time in said first application at which said runtime event occurred.
10. The method of claim 6 wherein said fields in said event record include an address field identifying an address at which said runtime event occurred in said first application program.

11. The method of claim 1 wherein said reference to said tag is at a predetermined position from a start of said record.

12. A computer-implemented method in a computer system of processing data generated in a first application program by a second application program during runtime, said method comprising the following steps:

- a. said first application program generating records during said runtime, said records including:
  - i. a plurality of fields, at least one of said plurality of fields containing data generated by said first application program, and other of said plurality of fields containing descriptive information regarding said generated data;
  - ii. a reference to a tag record, said tag record listing names of each of said plurality of fields contained in said referencing record, said tag record further recursively referencing a plurality of tag records, each referencing an associated tag record identifying fields in said referencing tag record, and ultimately, referencing a root record including a self-referential tag identifying said fields in said root record;
- b. said second application program receiving said generated records, and referencing said tag record and each of said plurality of associated tag records, recursively, until reaching said root record in order to identify said data by referencing said plurality of fields in each of said associated tag records; and
- c. said second application manipulating said data according to said identifying of said data specified by said record, said tag record and each of said plurality of associated tag records.

13. An apparatus in a computer system for processing data generated in a first application program by a second application program during runtime comprising:

- a. first circuitry for generating a record at said runtime from said first application program, said record including:
  - i. a plurality of fields, at least one of said plurality of fields containing data generated by said first application program, and other of said plurality of fields containing descriptive information regarding said generated data;
  - ii. a reference to a tag record, said tag record listing names of each of said plurality of fields contained in said record, said tag record further recursively referencing a plurality of tag records each referencing an associated tag record identifying fields in said referencing tag record, and ultimately, referencing a root record including a self-referential tag identifying said fields in said root record;
- b. second circuitry for receiving said record for second application program, and referencing said tag record and each of said plurality of associated tag records, recursively, until reaching said root record in order to identify said data by referencing said plurality of fields in each of said associated tag records; and
- c. third circuitry for manipulating said data in said second application according to said identifying of said data specified by said record, said tag record and each of said plurality of associated tag records.

14. A computer-implemented method in a computer system of processing data used in a first application program comprising the following steps:

- a. generating data in a record, said record including:
  - i. a plurality of fields each containing identifying information of said data in said record; and